

# Climate Change

What to think and what to do

## 8. Tools, Q&A and Plans

*We don't inherit the Earth from our ancestors, we borrow it from our children.*

Tools, Q&A and Plans

## Introduction

- Tools
  - Carbon Footprints & Offsetting
  - Thinking Differently
    - The Doughnut
    - Degrowth
  - How to talk about CC
  - Reminder re Resource List
- Q&A
- Plans for Action

## Tools – Carbon Footprints

The grubby history:

- *British Petroleum* (18,700 petrol stations worldwide), hired PR firm Ogilvy & Mather to promote the slant that climate change is not the fault of an oil giant, but that of individuals. BP first promoted and soon successfully popularized the term “carbon footprint” in the early 2000s. The company unveiled its “[carbon footprint calculator](#)” in 2004 so one could assess how their normal daily life – going to work, buying food, and (gasp) traveling – is largely responsible for heating the globe.

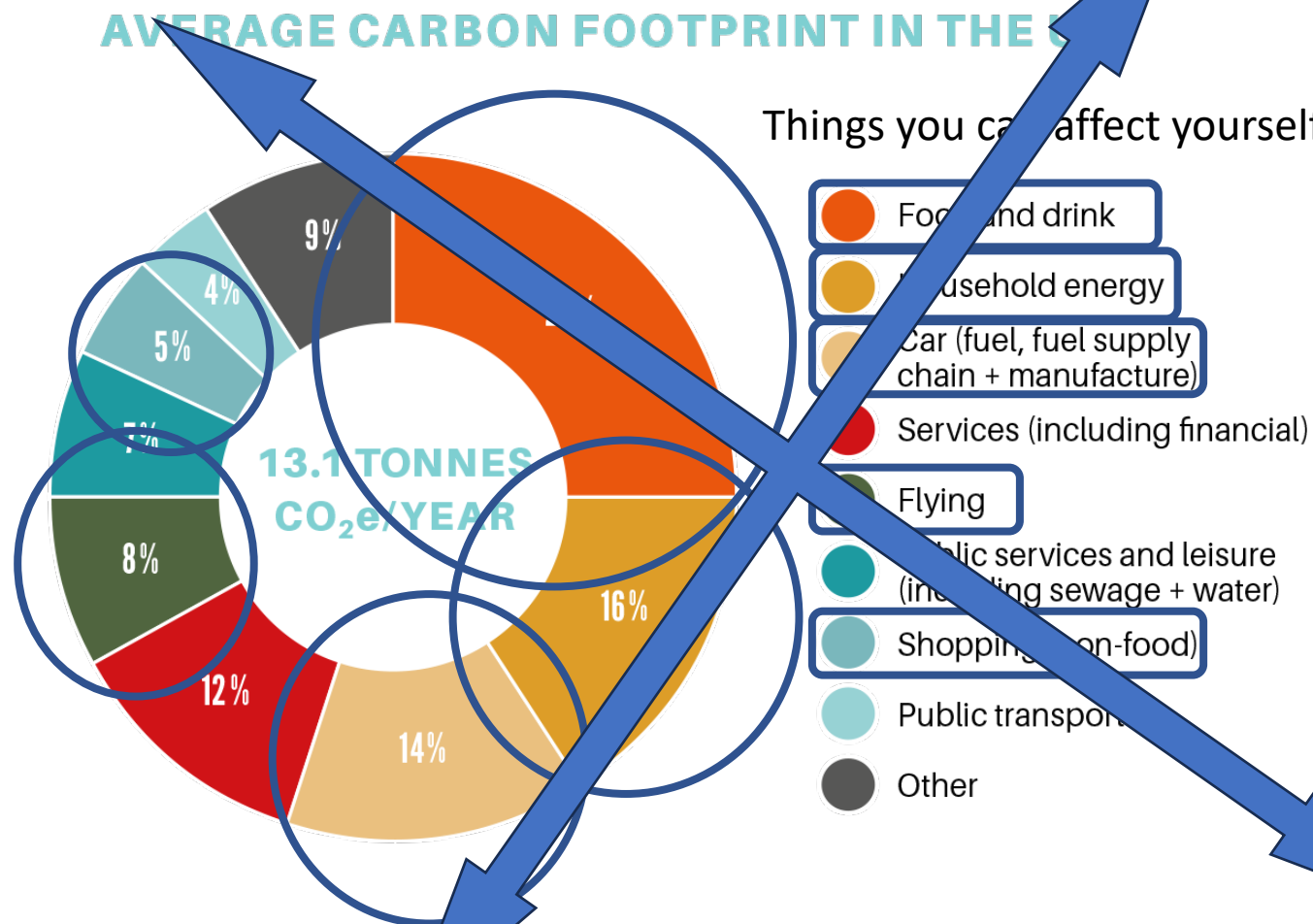
Nevertheless, if done correctly, and NOT used to pass the buck, they’re a useful tool.

Global footprints

- Measured in Tonnes of CO<sub>2</sub> per capita
- *Consumption-based* emissions : (Tonnes/person/yr) [Wikipedia](#)
- (Production-based figures *flatter* rich *service* economies because we’ve offshored dirty production and import the goods instead  
eg UK around 6, US around 16)
- NB. 2020 data. Things change.

United States	15.5
Japan	9.5
Russia	9.3
Germany	9.2
China	7.0
United Kingdom	6.9
France	5.8
India	1.6
Pakistan	1.0
World	4.7

## Tools – Carbon Footprints



My approx. calc: 8.0-9.5 vs UK ave 13.1  
Can't get it down much further, without change around me, from Corps/Govts etc.

- Note 13.1 is *much* higher than Wikipedia number (prev slide) 8.5. I don't know why. Perhaps SWC is including (our share of relevant) international shipping & aviation? Also, no calcs should be treated as gospel – turning human lifestyle into Tonnes of CO<sub>2</sub> involves many underlying assumptions.
- Still, a decent guide on what to cut down
- **UPDATE: SWC seems to have stopped publishing its CF Calculator (not their core business as a consultancy)**
- **So try the [WWF Footprint Calculator](#) (I scored 6.8-8.7, UK ave 9.5 – more in line with Wiki data)**

\*A **carbon footprint** measures the total greenhouse gas (GHG) emissions caused directly and indirectly by a person. It's **measured** in tonnes of **carbon** dioxide equivalent (tCO<sub>2</sub>e), a standard unit which expresses the impact of different GHGs.

Source: Small World Consulting

## Tools – Offsetting

Offsetting is the act of doing something (usually donating) to effect a *reduction* in CO<sub>2</sub> emissions equal to the emissions from whatever is to be offset.

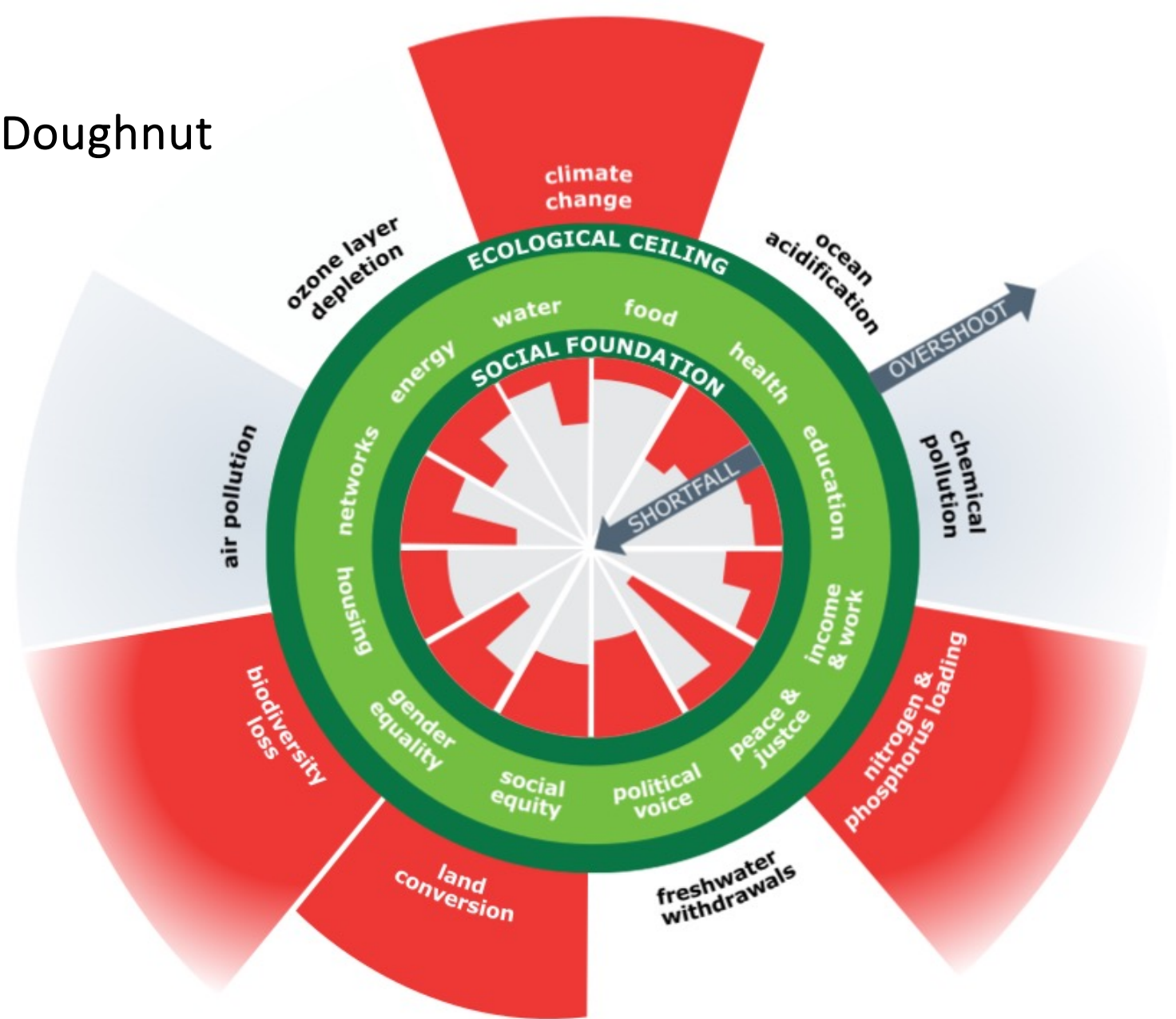
- E.g. return flight from London to Australia via Tokyo emits **8,658 kg CO<sub>2</sub>** (using [Offset your flight – atmosfair](#))
  - (which is the total life-time emissions of a 17 year old Ethiopian!)
  - So that's the amount to be offset
- You can either
  - pay the stated cost for offsetting to a non-profit like atmosfair (their number is €244 or about £215), or
  - go to another site, e.g. [www.goldstandard.org](http://www.goldstandard.org) and find a project you want to support, e.g. “Improved Cookstoves in Guinea” priced at USD20/tonne, i.e. USD180 (about £145) for the 9 tonnes you need
  - Of course you can offset less than your full emissions, or more
  - Beware cheap offsets – e.g. offered by the airline itself
- Treat with great caution:
  - offset projects that involve protecting forests
  - the use of offsets by corporates to allow continued polluting behaviour
    - Not automatically wrong, but there is a strong tendency toward greenwashing.
- And avoid falling into the trap “well, it's offset so I can do as much as I like!”
- Offsetting is not a magic bullet, just a balancing of a specific harm.
- See further, e.g., [Greenwashing or a net zero necessity? Climate scientists on carbon offsetting](#)
  - “there is **no** emissions space for companies to use offsetting **as a means of** further locking in high-carbon activities, technologies, norms and practices, even under the heroic assumption that offsetting actually works. Put simply, we need to pull every mitigation level to its max level; there is no longer any give or flexibility in the system.”

Prof Kevin Anderson, deputy dir Tyndall Centre For Climate Change Research, Univ of Manchester

## Tools – Thinking differently – the Doughnut

(Interactive version at [Doughnut | Kate Raworth](#))

- We need to be in the GREEN ring
- Of 9 planetary boundaries, 4 are clearly in crisis (unsustainable overshoot)
- 2 more probably, but no agreed measure
- And on all 9 measures, we have not met basic human needs (Social Foundation shortfall)



## Tools – Thinking differently – the Doughnut

Oxford economist *Kate Raworth* has set out seven principles for thinking like a 21st-century economist in order to bring the world's economies into a safe and just space for humanity:

- Embrace a new goal. Our economies are currently based on the goal of endless GDP growth, which fails to meet all our needs as it damages our planet. It is time to work toward a new goal: thriving in a safe and just space, or, as we like to call it, getting into the Doughnut!
- See the big picture. We often hear about the power of the market to provide for us, but we must take a step back to see the big picture of the economy as embedded within, and dependent upon, society and the living world.
- Nurture human nature. Doughnut Economics recognizes that humans aren't just self-centered, acting in isolation, or behaving in predictably "rational" ways, but are caring beings, adapting to their social context, and can nurture cooperation.
- Think in systems. Doughnut Economics understands that economies are nonlinear complex adaptive systems like the roots of a forest, with independent agents, and not based on linear, reductionistic, or equilibrium models like the cogs of a machine.
- Be distributive. Extreme inequality is a design failure of our current economic system. We recognize that there are many ways to design economies to be far more distributive of value among those who help to generate it.
- Be regenerative. Environmental degradation is the result of degenerative industrial design. We can create a truly circular economy instead of thinking that someone else will clean up our mess.
- Aim to thrive rather than to grow. It is time for us to recognize that nothing grows forever – living systems also need time to mature. Doughnut Economics rejects the idea that economies should grow whether or not they make us thrive, and advocates for an economy that makes us thrive whether or not it grows.

## Tools – Thinking differently – Degrowth

### Sustainable degrowth:

- Is a downscaling of production and consumption that *increases* human well-being and enhances
  - ecological conditions, and
  - equity on the planet
- Calls for a future where societies live
  - within their ecological means
  - with open, localized economies
  - with resources more equally distributed through new forms of democratic institutions
  - so that societies no longer have to “grow or die”
- Relegates *material accumulation* from prime position in the population’s cultural imagery.
  - With a focus on *sufficiency* not efficiency
  - With innovation focused on new social and technical arrangements that will enable us to live convivially and frugally
  - [*“Private Sufficiency and Public Wealth”*: George Monbiot]
- Removes GDP as the overarching policy objective and builds towards
  - a *lower but sustainable* level of production and consumption
  - a shrinking of the economic system to leave more space for human cooperation and ecosystems
  - [GDP is a lousy proxy for well-being:
    - Car crashes & drug rehabs raise it. Happy marriages & clean air don’t. Natural wilderness is WORTHLESS, until paved over.
    - Where a billionaire gets a trivial £200 and a pauper loses a vital £199, that’s *positive*.]
- Is built around acceptance that “people should live *simply* so others, human and non-human may simply *live*”  
[www.degrowth.org](http://www.degrowth.org) - research, training, awareness raising and events organization around degrowth
- The key point is that degrowth is a bad name for a seriously timely (essential?) idea.



## Tools – How to talk about CC

People are affected by who they talk to – talking is important, especially 1-1

There are many guides and resources, all covering similar ground

I'll summarise four

- I won't cover *Have the Talk: Climate Conversations* (by NOAA Climate.gov) - the most detailed and comprehensive - but it's available [here](#) if you plan to get serious and do a lot of talking!

## Tools – How to talk about CC - Messaging

[Talk-Like-a-Human.pdf \(potentialenergycoalition.org\)](https://potentialenergycoalition.org/Talk-Like-a-Human.pdf)

1. **Talk like a human** - Regular people aren't policy wonks. Connect using language they understand.
  - Words to avoid: • Decarbonization • Net zero • Anthropogenic • Green house gasses • Carbon footprint • 1.5 degrees • 100 year storm (what is that?)
  - Words to use: • Pollution • Overheating • Extreme weather • Costing people too much • The hottest year on record
2. **Don't exaggerate** The truth is motivating enough. Catastrophe messaging can be polarizing especially if it seems like it comes with a political agenda. The key is to make the connection so people understand it on their own, rather than yell "CRISIS!" Be the rational source during the storm.
3. **No partisanship** Language can be political. Be mindful of perpetuating triggering tropes. Use language that appeals equally to conservative and progressive values. Simply saying "it's not political" immediately lowers people's defenses
4. **Keep it local** We care about what we experience. Tie climate change to its real consequences. Avoid 'Planetary'
5. **Humans, not concepts** People care about people, not abstract concepts. Spare us the theoreticals: global competitiveness, green innovation boom, economic leadership arguments. What works is that people like me are being affected
6. **Fight pollution, not climate change** We aren't fighting climate change. We are fighting the polluters who are causing climate change
7. **Focus on today** The future is easy to ignore. What's happening now matters now. Avoid '2030', '2040' etc.
8. **Messengers make the message** People are more likely to trust information from trustworthy sources. Those still exist

## Tools – How to talk about CC - **Tactics**

A. *The #TalkingClimate Handbook* <https://climateoutreach.org/reports/how-to-have-a-climate-change-conversation-talking-climate/>

- Good conversations aren't about exchanging *data* or winning an *argument* - they are about
  - Collaboration – seeing the whole person, engaging an issue together
  - Ending with everyone feeling they've been understood – and sorry it's over (not relieved!)
- Conversations about climate change are no different.
- Follow these principles (“REALTALK”):
  - **R**espect your conversational partner and find common ground
  - **E**njoy the conversation
  - **A**sk questions
  - **L**isten, and show you've heard
  - **T**ell your story (why you're concerned, what you're doing)
  - **A**ction (on your part) makes it easier (to start conversations)
  - **L**earn from the conversation
  - **K**eep going and keep connected

## Tools – How to talk about CC - Tactics

B. From the [ClientEarth Handbook](#) (not online, as it's a recruiting tool so they ask you to register, but I can supply)

1. Ask questions

- show them you're interested in them, not just waiting to speak
- And learn about them, what kind of thing lights their candle – so you can....

2. Reframe the issue – make it about something close by and immediate, not distant and future, e.g.:

- Health (air pollution, heat exhaustion, ...)
- the Economy
- the Environment

or (more personally to them):

- maintaining a Good Lifestyle
  - it's a common misinformed trope that climate action is expensive, but compared to inaction, it's CHEAP
  - There are multiple potential benefits not costed into cold GDP figures, like community, leisure, fairness, that all flow from Climate Action
- reacquiring a sense of Security, getting rid of anxiety (finally, we are DOING something)
- our Children!

3. Tell convincing stories

- anecdotes, not data (humans respond much more deeply to human stories)

4. Know your stuff

- embed about 10 basic *facts* in your head (impactful ones, not dry statistics)

5. Keep calm

- Rome wasn't built in a day

## Tools – How to talk about CC - **Goals**

C. From *training materials for Union recruitment* - adapted for CC

- Structuring a conversation: **AHA!**

- **A**nger – find what specifically lights *their* fuse - e.g. is it:
  - destruction of nature/birdlife/insects
  - the cost to the economy
  - human suffering by kids in developing countries?

*Ask them – they'll tell you!*

- **H**ope – give them hope that there are ways to solve/alleviate the problem
- **A**ction - outline possible actions that can help - that *they* can support/get involved in

- In discussion, when an objection or diversion is raised: **AARgh!**

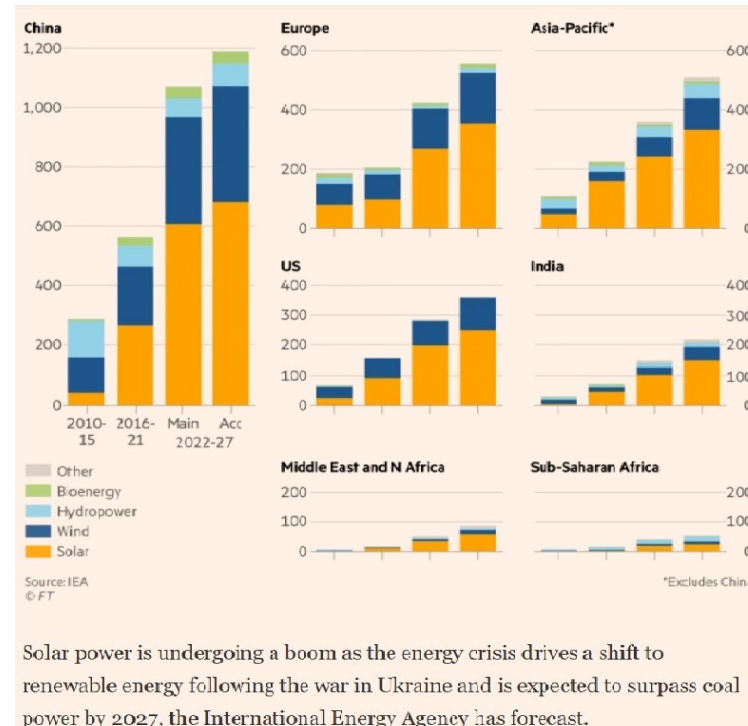
- **A**ffirm – don't disrespect the objection, rather acknowledge it (e.g. "Yes a lot of people express that concern")
- **A**nsWER – provide substantive replies that defuse or reduce the importance of the objection (i.e. it's not a slam dunk objection)
- **R**efocus – return to what lights *their* fuse, **g**et them **h**ooked (on the hope and action)

Tools, Q&A and Plans

## Tools – arm yourself with some optimism!

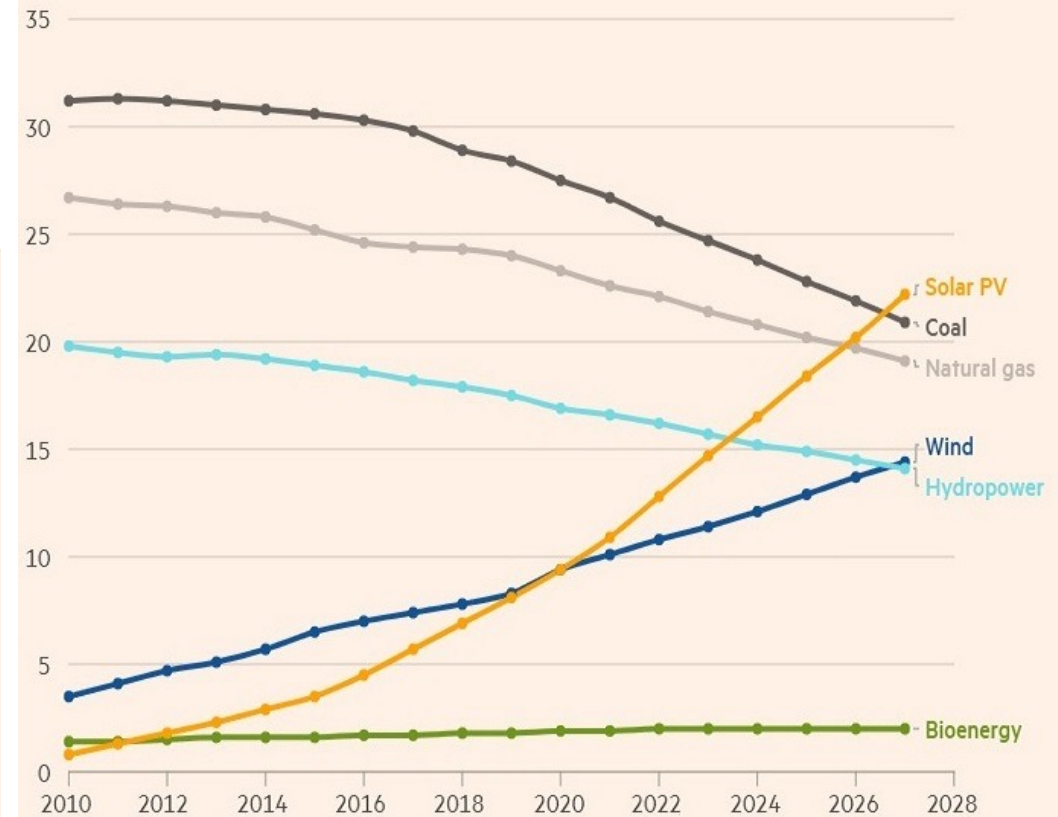
There is progress...

- China *is* serious, solar is ramping fast everywhere
- We *are* weening ourselves off coal, and even gas. (IEA forecasts)



Solar PV's installed power capacity is poised to surpass that of coal by 2027

Share of cumulative power capacity by technology (%)



FINANCIAL TIMES

Source: IEA

- [Germany can reach 100% 'clean energy' by 2035 for less than fossil fuel spending | by RethinkX, disruptive technology think tank](#)  
Germany can shift its entire electricity system onto solar, wind and batteries by 2030 for less than 1% of its GDP.  
Its entire energy system can go 100% clean energy by 2035 for less than what it spends on fossil fuels.  
In 10–15 years, Germany can permanently end dependence on fossil fuels. (And if they can, so can we!)

## Climate Change – What to think and what to do

# Resources (selected – there are so many resources in multiple formats) - 1

### Overview on urgency and history

- Greta Thunberg – *The Climate Book 2022*
- George Monbiot – *This can't be happening 2021* (collected essays – short little book)
- James Lovelock - *We Belong to Gaia: (Green Ideas) 2021* (collected essays by peons of Environmentalism)

### The economic perspective

- Naomi Klein – *This changes everything 2014*
- Kate Raworth – *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist 2017*
- Tim Jackson – *Post Growth: Life after Capitalism 2021*, or Jason Hickel – *Less is More: How Degrowth Will Save the World 2021* (both on Degrowth)
- Adrienne Buller - *The Value of a Whale: On the Illusions of Green Capitalism* (or listen to AB in discussion with Grace Blakeley, as part of her “A World to Win” series) - [Is Green Capitalism Possible?](https://podcastaddict.com/episode/143603961) (<https://podcastaddict.com/episode/143603961>)
- James Marriott and Terry Macalister – *Crude Britannia 2021: How Oil Shaped a Nation* (on links between Big Oil and Power Elites)

### What to do

- Jonathon Porritt – *Hope in Hell 2020*
- Mike Berners-Lee – *There Is No Planet B: A Handbook for the Make or Break Years 2021* (also: *How Bad Are Bananas?: The carbon footprint of everything - 2020 new edition*)
- Roman Krznaric - *The Good Ancestor: How to Think Long Term in a Short-Term World 2021* (also a TED talk video)
- Sarah Bridle – *Food and Climate Change without the hot air 2020*
- [ThirdAct.org - Resources Archive](#) (thirdact.org is squarely aimed at those aged over 60 - US site, but lots of useful guidance – e.g.
  - [Banks Pledge Toolkit](#), about rejigging your finances)
- Thread by @ThierryAaron “What can we do?” (<https://threadreaderapp.com/thread/1590329428030021632.html>)
- [Make My Money Matter - your pension is powerful](#) – initiative about pension switching, claiming that doing this is doing 21x more than stopping flying, going veggie and switching energy supplier, combined!



## Climate Change – What to think and what to do

# Resources (selected – there are so many resources in multiple formats) - 2

### Information resources to share

- With those who think there's still a debate to be had:
  - [Bill Nye to Climate Change Deniers: You Can't Ignore Facts Forever | Big Think](#) (from c 2013, still true)
- With those who think "It won't be too bad":
  - [\(82\) Earth at 2° hotter will be horrific. Now here's what 4° will look like. | David Wallace-Wells – YouTube](#)

### Guides on talking to people effectively

- <https://climateoutreach.org/reports/how-to-have-a-climate-change-conversation-talking-climate/>
- [Talk-Like-a-Human.pdf \(potentialenergycoalition.org\)](#)
- *Speak up for the planet - Your guide to having climate change conversations* (from ClientEarth.org – you have to register to receive PDF)
- Or if you're going to do a lot of this, consider: [Have the Talk: Climate Conversations | NOAA Climate.gov](#)  
(<https://www.climate.gov/teaching/resources/have-talk-climate-conversations>)

### Novels

- Kim Stanley Robinson - *The Ministry for the Future* ("a must-read for anyone worried about the future of the planet" Publishers Weekly starred review)
- Ned Beaman - *Venomous Lumpsucker* (humorous sci-fi)

### Movies

- A discussion of relevant best films: [https://twitter.com/david\\_ho/status/1597351474517770240?s=12&t=UwQsyKmeQd4\\_gBO7aCRp-Q](https://twitter.com/david_ho/status/1597351474517770240?s=12&t=UwQsyKmeQd4_gBO7aCRp-Q)
- Or here if you're not on Twitter: [What's the best film about climate change? by @ david\\_ho \(David Ho\) \(twitter-thread.com\)](#)
  - *About 100 films, many just set in dystopian futures, but here are some:*
  - "Fiction"
    - *An Inconvenient Truth*
    - *Don't look up*
    - *The Age of Stupid*
    - *The Day after Tomorrow*
  - Documentaries (all on BBC iPlayer)
    - *The Oil Machine*
    - *A Life on Our Planet (David Attenborough)*
    - *Climate Change - The facts (David Attenborough)*
    - *The Great Climate Fight (Mary Portas et al)*



## **Resources (selected – there are so many resources in multiple formats) - 3**

- IPCC Reports
  - <https://www.ipcc.ch/report/sixth-assessment-report-cycle/>
  - This link gets you to all the sub-reports
- The IPCC is currently in its Sixth Assessment cycle, during which the IPCC will produce
  - the Assessment reports of its three Working Groups
    - WGI – The Physical Science Basis
    - WGII – Impacts, Adaptation and Vulnerability
    - WGIII – Mitigation of Climate Change
  - three Special Reports
    - Global Warming of 1.5°C
    - Climate Change and Land
    - The Ocean and Cryosphere in a Changing Climate
  - a refinement to the methodology report
  - the Synthesis Report. The Synthesis Report will be the last of the AR6 products, due out in late 2022/early 2023
- The Synthesis Report (SYR) will
  - synthesise and integrate materials contained within the Assessment Reports and Special Reports
  - be written in a non-technical style suitable for policymakers
  - address a broad range of policy-relevant but policy-neutral questions approved by the Panel
  - It is composed of two parts
    - a Summary for Policymakers (SPM) of 5 to 10 pages
    - a Longer Report of 30 to 50 pages.

## Climate Change – What to think and what to do

### Resources (selected – there are so many resources in multiple formats) - 4

- Information Websites

- [#CCLS Cambridge Climate Lecture Series \(climateseries.com\)](#)
- [Cambridge Zero | www.zero.cam.ac.uk](#)
- [Centre for Climate Repair at Cambridge |](#)
- [DeSmog](#) – “founded in January 2006 to clear the PR pollution that is clouding the science and solutions to climate change. Our team quickly became the world’s number one source for accurate, fact-based information regarding global warming misinformation campaigns.”
- [InfluenceMap Home](#) – “an independent think tank producing data-driven analysis on how business and finance are impacting the climate crisis”

- Offsetting

- [Atmosfair.de/en/](#) – “a German non-profit organization that actively contributes to CO<sub>2</sub> mitigation by promoting, developing and financing renewable energies in over 15 countries worldwide”
  - Calculate Offset required here: [Act Now! - atmosfair](#)
  - Choose project to fund here: [Project overview – atmosfair](#) or here: [Projects – Gold Standard Marketplace](#)

- Cause and Activist Websites

- Too many to list – see seminar 7 (mainly)
- But <https://www.thecommitment.uk/> is an easy one. By signing up you commit to vote in the next GE based on who you feel will work for urgent action on the climate and nature, giving your particular concerns/reasons. They collate (first names and reasons) and forward to the relevant candidates. Not partisan.

Tools, Q&A and Plans  
Q&A – and Plans!

# Questions

# Discussion

(with, I hope, a focus on)

# Plans & Collaboration